

CALON  
EVR 100  
1984  
T56  
c.2

TOTAL REDUCED SULPHUR  
MONITORING SURVEY CONDUCTED IN  
SMOOTH ROCK FALLS FROM  
OCTOBER 1980 TO APRIL 1982

Prepared by:

R. R. Potvin  
Chief, Air Quality Assessment  
Northeastern Region

April 1984

NER - AQTM 10-84

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### Introduction:

Ambient concentrations of Total Reduced Sulphur (TRS) compounds, expressed as hydrogen sulphide ( $H_2S$ ), were monitored in the Town of Smooth Rock Falls from October 1980 to April 1982. The purpose of this monitoring program was to determine ambient levels of TRS in the Town before and after the installation of additional pollution control equipment at the Abitibi Paper Company Limited kraft mill as required under a Ministry of the Environment Control Order.

### Monitoring Program:

The monitoring station was located at the Municipal Garage which is in the west end of the Town, off Second Avenue (see Figure 1). This monitoring site is about 0.4 kilometers from the centre of the Abitibi Mill Complex. A TECO 43 sulphur dioxide ( $SO_2$ ) analyzer, in combination with a TECO 340 TRS to  $SO_2$  converter, was used to measure ambient TRS concentrations. The converter unit oxidizes all reduced sulphur compounds emitted from kraft pulp mills such as ethyl mercaptan, methyl mercaptan, dimethyl sulphide, dimethyl disulphide, etc. to  $SO_2$ . The concentration of the resulting  $SO_2$  is then measured by the  $SO_2$  analyzer. Compensation for the background  $SO_2$  present in the air is provided for, such that this  $SO_2$  is not included in the determination of the actual TRS concentrations in the ambient.

The monitoring program was terminated in April of 1982 for the following reasons: first of all, it was realized that the station was located too

close to the mill complex, thereby possibly underestimating TRS groundlevel concentrations at the point of impingement which is believed to be further downwind. Secondly, the TECO analyzer was found to be too temperature sensitive for the environment present in the Municipal Garage, resulting in appreciable and undesirable instrument signal drifts. Lastly, problems were encountered with the converter unit with respect to calibrations using the internal  $H_2S$  source. These instrumentation problems are felt to have resulted in lower than actual TRS levels by as much as 20% during fumigations. However it is believed, that on average, the margin of error was actually considerably less than that figure. Improvements in the operation of the converter have now been realized such that the accuracy of the data is believed to be acceptable.

#### Provincial Criterion for TRS:

The current provincial ambient air quality objective for TRS emitted from kraft pulp mills is set at  $40 \mu g/m^3$  (27 ppb), expressed as  $H_2S$  averaged over one hour. In addition, a provisional guideline for TRS, again expressed as  $H_2S$ , of 27 ppb for a half-hour average has been set by the Ministry. This guideline is used for the approval of new or modified facilities. The provisional guideline is considered a temporary measure until such time when ambient monitoring methodology has developed to the point of enabling the individual measurement of the major reduced sulphur compounds involved. At the Abitibi mill, stack gas measurements have shown that most (>90%) of the TRS emissions consist of  $H_2S$ .



## Results:

A summary of the TRS data, expressed as  $\text{H}_2\text{S}$ , collected in Smooth Rock Falls from October 1980 to April 1982 is presented in Table 1. Computer printouts of the raw data are appended. From October 21 to December 31, 1980 only one hour exceeded the provincial hourly criterion of 27 ppb; the maximum hourly average recorded was 29 ppb. The average for this period was 0.3 ppb. In 1981, which was the only complete year of monitoring, the hourly criterion was exceeded during a total of 119 hours. The maximum hourly average recorded was 116 ppb, whereas the average TRS level for the year was 2.1 ppb. From January 1 to April 28, 1982, the hourly criterion was exceeded on 30 occasions; the maximum hourly average recorded was 82 ppb and the average concentration was 2.0 ppb.

A more detailed summary is provided in Table 2. From these data, it appears that TRS concentrations were generally higher during the colder months, and/or when the wind is predominantly from the north. During these periods the monitoring station is likely to be, on average, downwind of the mill.

Of significant interest is the impact on ambient TRS levels (at the monitoring location) of additional pollution control equipment installed at the Abitibi mill in June 1981 to reduce stack TRS emissions. Analysis of the data, see Table 3, for the periods October to May 1981 and July 1981 to April 1982 (excluding February 1982 due to the shutdown of the scrubber from February 11 to 26) revealed that the average monthly TRS levels and the number of hours over the criterion were marginally higher during the time that the scrubber was in operation.

Without more detailed mill operations data, wind speed/direction data from Smooth Rock Falls, and on the basis of the TRS data available at this time, it appears that the additional air pollution control equipment installed at the Abitibi mill in June of 1981 had no significant impact on TRS levels as measured at the Municipal Garage during the period covered in this report. However, it should be emphasized that the TRS data base both before and after June 1981 is rather limited and that start-up problems could have been experienced with the new air pollution control system. In addition, fugitive (low level) TRS emissions from the complex could have masked contributions from stack emissions, in view of the close proximity of the monitoring station.

This finding stresses the need for continued TRS monitoring in the Town at a different location and over a longer period of time in order to better determine average ambient TRS levels, and also to better assess the effect of additional pollution control measures for stack gases at the Abitibi mill. There is also a need to determine the contribution of TRS fugitive emissions in order to better assess the performance of present/future abatement measures. This can best be done by conducting a mobile TRS monitoring survey in the Town.

RP/sgl/R45-F

TABLE 1

SUMMARY OF TOTAL REDUCED SULPHUR DATA COLLECTED IN SMOOTH ROCK FALLS  
FROM OCTOBER 1980 TO APRIL 1982

	Sample Size (Hours)	Valid Data (%)	Max. Value (ppb)	Arithmetic Mean (ppb)	No. of Hours Above The Provincial Criterion	% Above Criterion *
1980	1704	77.2	29	0.3	1	0.06
1981	8682	99.1	116	2.1	119	1.38
1982	2634	91.5	81	2.0	30	1.13

\* Provincial Criterion is 27 parts per billion (ppb) for one hour.

TABLE 2

SUMMARY OF TOTAL REDUCED SULPHUR DATA COLLECTED IN SMOOTH ROCK FALLS  
FROM OCTOBER 1980 TO APRIL 1982

		Sample Size (Hours)	Average Concentration (ppb)	No. of Hourly Averages	
				11 to 27ppb	greater than 27 ppb
1980	October	248	0.5	4	0
	November	716	0.2	3	1
	December	740	0.3	8	0
1981	January	739	0.8	7	4
	February	657	2.1	29	12
	March	715	3.8	59	15
	April	718	3.1	35	31
	May	742	2.7	32	5
	June	720	2.4	25	18
	July	739	0.7	12	1
	August	744	1.2	25	4
	September	709	0.1	0	0
	October	738	0.7	22	0
	November	718	1.8	22	11
	December	743	5.7	38	18
1982	January	740	0.9	14	4
	February	583	0.7	7	2
	March	658	4.4	30	14
	April	653	2.0	15	10

TABLE 3

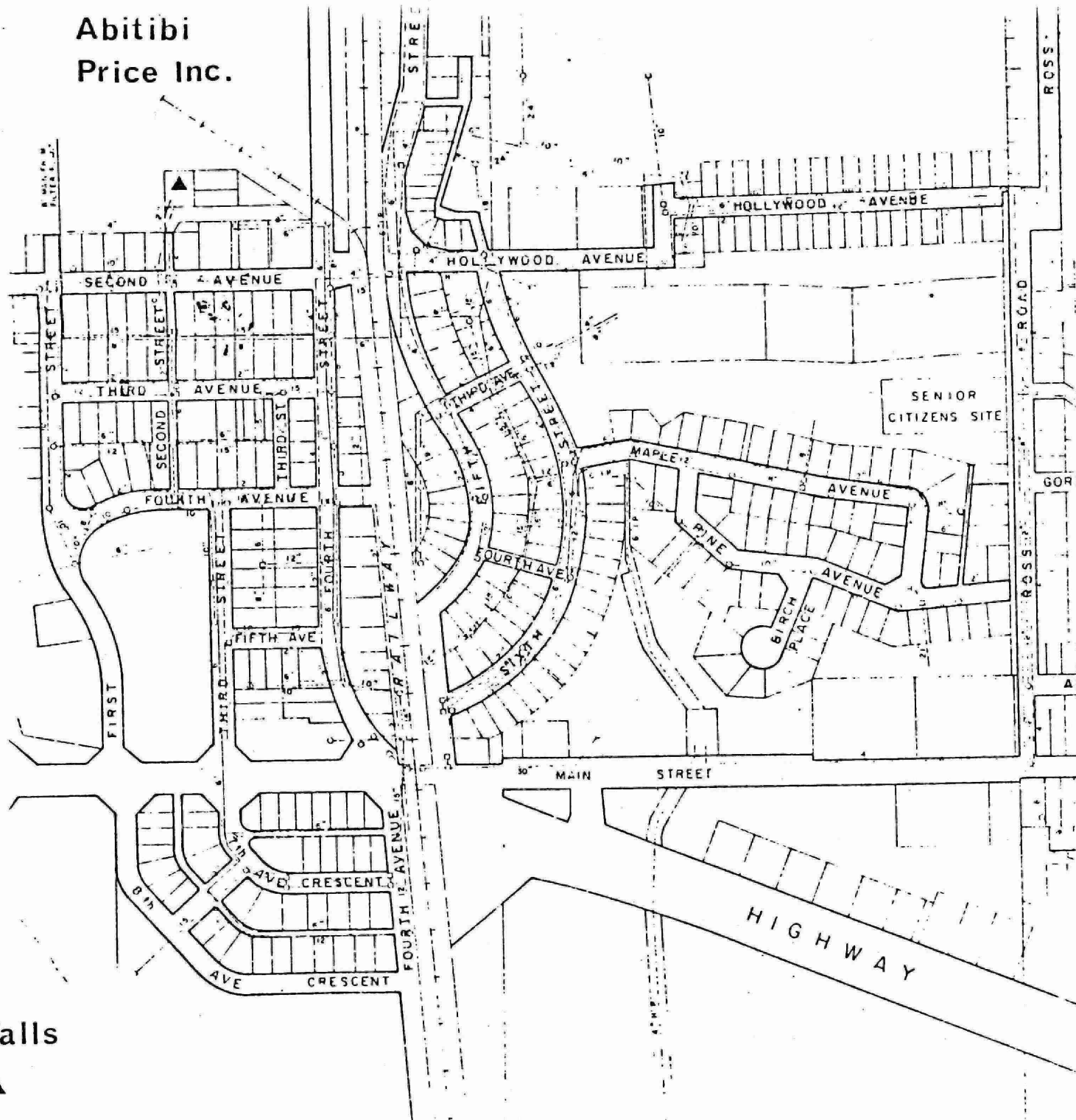
SUMMARY OF TOTAL REDUCED SULPHUR DATA COLLECTED IN SMOOTH ROCK FALLS  
FROM OCTOBER 1980 TO MAY 1981

Sample Size (Hours)	Average Monthly Concentration (ppb)	No. of Hours Over Provincial Criterion
4747	1.7	68

SUMMARY OF TOTAL REDUCED SULPHUR DATA COLLECTED IN SMOOTH ROCK FALLS  
FOR THE PERIOD JULY 1981 TO APRIL 1982  
(EXCLUDING FEBRUARY 1982)

Sample Size (Hours)	Average Monthly Concentration (ppb)	No. of Hours Over Provincial Criterion
6442	1.9	72

Abitibi  
Price Inc.



Smooth Rock Falls  
TRS Monitor ▲

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

JUL 01, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 720-3

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - OCT 80

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
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1																										
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19																										
20																										
21	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1	0	0	0	3	12	2	4	****	****	****	3	5	3	0	0	3	1	3	2	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	3	13	24	17	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	1	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5

PERCENTAGE OF DATA VALID - 33.3

PERCENTAGE OF DATA INVALID - 0.5

PERCENTAGE OF DATA UNAVAILABLE - 66.1

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

## OTTAWA MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

JUL 01, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-DIOXIDE

UNITS - PARTS/BILLION

STATION - 22003

MUNICIPAL GARAGE - SMOOTH ROCK FALLS

MONTH - NOV 80

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2	11	3	2	1	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	2	7	8	3	3	4	3	1	1	1	3	2	2	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	4	1	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	1	1	2	5	5	5	6	4	0	0	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0.2

PERCENTAGE OF DATA VALID - 99.6

PERCENTAGE OF DATA INVALID - 0.6

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 24 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA



STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - DEC 80

HOURLY DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	0	0	0	5	3	8	16	11	8	3	8	****	6	6	12	4	11	14	23	18	1	1	0	2	7
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	****	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	****	0	0	0	0	0	0	0	0	0
10	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	11	1
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	1	0	0	1
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0.3

PERCENTAGE OF DATA VALID - 99.5

PERCENTAGE OF DATA INVALID - 0.5

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

JUL 01, 1982

MONTHLY SUMMARY OF HOURLY AND 2-HOURLY DATA FOR 1980

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063 MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH	NO OF DAYS	AVERAGE CONCENT	24-HOUR MAXIMUM	MAXIMUM READING
JAN		DATA UNAVAILABLE		
FEB		DATA UNAVAILABLE		
MAR		DATA UNAVAILABLE		
APR		DATA UNAVAILABLE		
MAY		DATA UNAVAILABLE		
JUN		DATA UNAVAILABLE		
JUL		DATA UNAVAILABLE		
AUG		DATA UNAVAILABLE		
SEP		DATA UNAVAILABLE		
OCT	10	0.5	3	24
NOV	30	0.2	4	29
DEC	31	0.3	7	23
YEAR	71	0.3	7	29

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

JUL 01, 1982

MONTHLY GROUP FREQUENCY DISTRIBUTION FOR 1980

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063 MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH 00 TO 10 11 TO 20 21 TO 27 28 TO 50 51 TO 100 101 TO 300 301 TO 500 501 & OVER TOTAL

JAN DATA UNAVAILABLE

FEB DATA UNAVAILABLE

MAR DATA UNAVAILABLE

APR DATA UNAVAILABLE

MAY DATA UNAVAILABLE

JUN DATA UNAVAILABLE

JUL DATA UNAVAILABLE

AUG DATA UNAVAILABLE

SEP DATA UNAVAILABLE

OCT 244 3 1 4 0 0 0 0 0 0 248

NOV 712 3 0 3 1 0 0 0 0 0 716

DEC 732 7 1 8 0 0 0 0 0 0 740

YEAR 1685 13 2 1 0 0 0 0 0 1704

FREQUENCY DISTRIBUTION BY PERCENTILES

PERCENT  
OF DATA

CONCENTRATIONS  
FREQUENCY DISTRIBUTION, PERCENT

ARITH  
MEAN

VALID MIN 10 30 50 70 90 95 98 99 MAX  
77.2 0 0.0 0.0 0.0 0.0 0.0 0.4 4.2 7.8 29 0.3

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - JAN 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	4	3	0	0	1
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	3	3	2	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	1	0	0
16	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	2	3	6	26	4	4	17	8	3	1
23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	7	6	0	1
24	2	3	11	7	1	0	3	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	9	18	0	19	8	5	4	5	2	0	0	0	0	0	4
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	3	7	2	0	2	0	3	1	25	18	23	35	10	1
29	3	0	0	0	0	0	0	0	0	0	3	7	5	6	5	4	2	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	0	1	1	1	3	3	1	1	0.8

PERCENTAGE OF DATA VALID - 99.3

PERCENTAGE OF DATA INVALID - 0.7

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "0000" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "00000" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - FEB 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	8	21	17	27		
2	22	7	5	16	38	4	13	5	12	3	5	5	10	10	2	4	6	6	6	6	3	3	0	0		
3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	2	1	0	1	1	1	1		
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	11	15	14	4	7	0		
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11	0	0	0	3	6	18	29	58	59	47	39	21	12	4	2	2	2	2	0	0	0	0	0	0		
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
14	0	0	0	0	7	22	15	0	0	0	2	9	8	5	0	0	0	0	0	0	0	0	0	0		
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	2	2	0	0	0	0	0		
18	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1		
20	0	0	0	6	1	1	1	2	1	0	0	0	2	0	2	4	1	1	1	1	1	1	1	1	1	
21	0	2	2	2	1	2	2	2	2	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
25	30	18	11	9	21	3	2	2	4	0	2	2	2	2	2	2	8	2	1	5	26	5	14	6		
26	5	3	3	17	21	18	14	13	13	0	4	3	3	2	2	2	2	2	4	0	0	0	0	0		
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
28	0	0	0	0	0	0	0	0	0	0	0	0	3	4	2	14	8	22	42	37	2	3	6	0		
MEAN	2	1	1	2	3	2	3	4	3	3	2	1	2	1	1	1	1	2	4	3	2	2	2	1		

PERCENTAGE OF DATA VALID - 97.8

PERCENTAGE OF DATA INVALID - 2.2

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA



ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - MAR 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	1	1	1	1	1	1	1	****	1	1	0	0	0	0	0	0	0	2	1	1	1	4	1
2	6	24	38	23	41	27	14	3	2	****	7	4	25	11	7	2	2	2	2	2	2	2	2	2	11
3	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	****	0	0	0	0	3	2	2	2	2	2	2	2	2	2	1
5	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	5	15	9	14	10	10	3	0	3	****	13	8	8	11	7	9	9	5	5	7	11	15	19	22	10
7	10	3	4	1	1	1	1	1	1	****	0	3	9	14	10	11	14	7	2	4	0	0	0	0	4
8	0	3	1	1	1	5	9	9	1	****	0	0	0	0	12	11	3	1	0	0	0	0	0	0	2
9	1	1	1	1	3	20	8	0	0	****	2	0	4	1	7	2	1	3	0	0	1	4	5	5	3
10	4	2	3	3	2	18	10	18	6	****	0	0	2	3	3	1	1	1	1	1	1	1	4	2	4
11	0	2	8	0	0	0	0	0	0	****	****	3	2	2	3	3	4	3	4	4	5	5	5	5	3
12	2	2	2	2	3	4	3	3	3	****	1	1	0	0	0	6	0	2	7	20	14	34	13	5	
13	2	28	25	25	56	17	13	4	2	****	5	3	0	0	3	7	2	2	1	1	1	1	1	1	9
14	1	1	1	1	1	1	1	1	1	****	0	0	0	0	0	0	0	1	2	1	1	1	1	2	1
15	2	2	2	1	1	1	1	2	2	0	0	1	3	4	5	0	15	14	24	40	21	13	0	0	7
16	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	2	15	10	10	13	4	2
17	8	6	5	3	2	2	2	2	2	****	2	2	2	1	1	1	2	4	3	2	2	3	1	9	1
18	10	5	3	2	1	1	1	1	1	****	0	0	0	0	1	3	5	4	6	11	20	20	16	16	6
19	3	0	1	4	3	3	3	8	2	****	10	3	13	10	12	6	14	7	5	14	15	5	5	12	7
20	2	8	17	5	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21	0	0	2	1	6	11	11	7	19	****	8	2	0	3	0	0	0	0	3	12	16	15	13	10	13
22	5	3	3	2	2	2	5	3	2	****	3	4	0	0	0	0	0	8	3	5	13	6	3	2	3
23	0	0	15	18	1	3	3	6	2	3	1	1	3	0	0	0	0	2	4	4	5	10	12	5	4
24	2	2	2	4	1	2	6	4	2	****	0	0	0	3	4	0	0	2	20	16	10	20	55	12	7
25	6	3	3	2	2	2	2	2	2	****	2	2	0	0	0	0	0	0	0	0	19	0	0	0	4
26	0	0	0	0	0	0	0	0	0	****	0	0	3	1	2	11	2	2	2	2	2	2	2	2	1
27	0	0	0	0	0	0	0	0	0	****	9	5	2	0	0	0	0	0	0	0	0	0	0	0	1
28	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	****	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	0	2	0	0	6	3	0
31	0	2	2	2	2	2	2	2	2	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MEAN	2	4	5	4	5	4	7	5	2	1	2	1	2	2	3	2	3	2	3	5	7	6	7	5	3.8

PERCENTAGE OF DATA VALID - 96.1

PERCENTAGE OF DATA INVALID - 3.9

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - APR 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	2	4	15	35	52	24	11	4	0	0	0	0	0	0	0	0	0	15	2	1	0	0	0	7
6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	4	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	5	3	0	2	****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	1	21	30	37	39	20	7	24	9	8	6	6	12	6	7	3	0	0	0	0	0	10
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	2	4	21	39	58	64	134	158	27	32	15	12	10	9	6	2	0	5	4	8	6	4	0	18
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	9	23	44	38	31	16	27	18	0	12	7	7	5	0	0	0	0	0	0	0	0	0	0	0	10
19	0	0	0	0	0	0	0	0	0	0	2	8	20	23	21	20	20	31	16	17	10	9	7	3	9
20	2	8	14	7	3	24	28	33	43	15	10	14	8	8	6	8	22	34	138	24	6	0	0	0	15
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	2	3	9	10	12	42	38	31	27	33	24	54	39	46	35	49	32	8	2	3	0	20
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	20	15	14	3	3	0	0	0	0	2
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	2	2	3	4	6	7	5	6	3	4	3	3	3	3	4	4	4	4	3	1	1	1	0	3.1

PERCENTAGE OF DATA VALID - 99.7

PERCENTAGE OF DATA INVALID - 0.3

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - MAY 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
7	1	1	1	1	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	3	3	2	0	2	2
10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	15	8	8	
13	11	9	11	12	6	8	13	10	8	2	5	8	10	11	12	13	5	3	4	8	8	2	0	6	8
14	5	1	2	3	2	4	1	3	5	0	4	11	10	7	2	2	3	6	1	0	7	141	102	142	12
15	22	12	8	10	3	3	3	20	10	3	3	0	0	0	0	0	0	0	0	0	2	4	4	5	6
16	8	7	8	14	10	9	11	9	12	14	17	13	9	6	7	8	6	5	8	14	11	9	14	9	10
17	4	4	5	5	5	5	7	7	7	7	5	5	7	6	9	7	11	15	19	24	12	4	4	4	8
18	26	8	4	4	4	4	4	6	7	4	5	4	3	0	0	2	2	2	7	15	4	4	3	3	5
19	5	20	9	5	5	5	4	2	5	10	5	5	3	2	2	4	5	9	3	4	172	26	1	1	9
20	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	3	3	3	4	3	4	1
21	4	4	4	5	4	5	5	5	5	4	3	2	3	3	1	2	1	1	1	1	1	1	2	2	3
22	2	2	2	3	4	4	4	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23	0	0	0	0	1	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1
24	0	0	0	1	2	2	2	2	4	2	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1
25	2	2	2	2	2	2	2	3	3	3	3	2	0	0	0	0	0	1	2	3	3	3	3	3	2
26	6	3	3	3	3	3	4	4	4	4	4	9	6	6	6	7	5	2	5	3	2	5	6	6	5
27	3	3	3	3	3	20	9	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
28	0	20	2	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
29	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	2	2	2	3	3	2	2	7	7	2	2	2	1	1	1	1	1	1	1	1	0	2
31	2	2	2	1	1	2	2	4	2	1	1	1	0	0	0	0	0	1	8	25	4	0	0	0	2
MEAN	3	4	2	3	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	4	5	4	5	4	2.7

PERCENTAGE OF DATA VALID - 99.7 PERCENTAGE OF DATA INVALID - 0.3 PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA



ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - JUN 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	2	2	2	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	1	1	1	1	2	0	0
6	0	0	0	0	0	1	2	1	4	5	14	5	5	5	10	11	8	5	26	27	27	27	8	3	9
7	6	12	4	2	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6	7	17	8	4	3	2
9	2	2	5	5	6	4	1	1	1	0	0	0	0	0	0	1	3	2	1	0	0	1	1	1	2
10	2	2	2	1	1	2	2	1	1	1	0	0	0	0	0	0	0	7	18	12	4	4	4	6	7
11	6	5	5	5	4	5	5	5	2	2	2	0	0	0	0	0	0	0	0	0	4	3	2	3	2
12	3	3	4	4	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	2	1	1	1
13	2	3	2	2	2	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	17	19	16	2
17	20	7	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	0	5	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	1	9	3	2	0	10	0	2	1
23	1	2	3	3	3	3	2	0	0	0	0	0	21	4	5	3	8	27	43	4	0	0	0	0	7
24	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	3	3	1	1	1	2	1	2	4	2	0	1	2	12	2	2	2
26	19	52	42	47	50	63	81	69	32	16	7	8	7	7	2	1	2	0	0	3	0	0	0	0	20
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	21	21	4	0
30	21	13	17	16	10	22	11	8	4	2	2	0	3	4	0	1	0	0	0	0	0	0	0	0	9
MEAN	3	3	3	3	3	4	5	3	2	1	1	2	1	1	1	2	3	2	3	2	3	4	2	2	2.4

PERCENTAGE OF DATA VALID - 100.0

PERCENTAGE OF DATA INVALID - 0.0

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

## ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

35

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - JUL 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	0	0	0	0	0	0	0	3	1	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	2	0	2	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	0	0	0	0	0	0	3	1	2	0	0	0	0	0	0	0	3	1	0
13	0	0	0	0	0	0	0	0	0	0	0	0	3	4	10	4	9	4	11	11	1	0	0	0	4
14	0	0	0	0	0	9	14	15	10	6	....	....	21	24	25	19	9	26	0	0	0	0	0	1	8
15	0	0	0	0	1	2	3	15	1	3	13	2	4	5	0	0	0	7	8	2	7	0	0	0	3
16	0	0	2	3	3	3	1	0	1	1	1	1	1	1	2	1	8	4	2	0	0	2	0	0	2
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	2	0	2	10	14	10	0	1	3	3	4	1	0	0	0	0	2
21	0	0	2	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	1
22	2	4	0	0	0	0	0	0	0	2	0	0	....	0	0	0	0	....	....	2	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	2	8	5	1	0	0	0	2	0	1
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	1	1	0	0	1	0	2	2	2	1	1	1	1	1	0	1	0	0	0.7

PERCENTAGE OF DATA VALID - 99.3

PERCENTAGE OF DATA INVALID - 0.7

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "...." INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "....." INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - AUG B1

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	1	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	4	2	0	1	0	0	1
5	0	5	6	0	0	2	6	7	5	1	1	2	2	2	1	2	1	0	1	2	1	1	0	0	2
6	10	7	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	8	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	5	1	0	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
15	0	0	3	3	4	8	17	12	21	5	15	17	15	13	14	10	6	6	7	6	5	6	7	10	10
16	11	19	23	24	4	13	12	11	13	14	12	9	1	9	8	6	6	7	7	0	9	19	3	0	11
17	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	7	16	19	4	12	35	17	6	20	9	3	2	6
24	0	0	4	18	15	2	5	6	10	0	2	2	8	2	1	8	4	0	0	2	1	1	1	1	4
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	2	0	0	0	0	4	4	0	0	0	0	0	0	1	2	12	3	0	0	0	0	0	0	0	1
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	1	1	2	2	1	1	1	1	2	1	1	1	1	1	2	2	2	2	1	1	1	1	1	0	1.2

PERCENTAGE OF DATA VALID -100.0

PERCENTAGE OF DATA INVALID - 0.0

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

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ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - SEP 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	4	4	5	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
30	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

PERCENTAGE OF DATA VALID - 98.5

PERCENTAGE OF DATA INVALID - 1.5

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "0.000" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "0.000" INDICATES DATA IS UNAVAILABLE

3. "0.000" INDICATES LESS THAN 273 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

## ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

3d

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - NOV 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	10	9	9	4	4	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	8	11	6	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	1	1	1	1	1	1	2
19	1	2	2	2	2	2	2	2	2	2	2	3	3	3	6	9	9	9	11	11	21	16	17	15	6
20	15	15	15	13	9	9	8	5	5	5	0	0	0	0	0	0	0	3	10	21	16	10	9	12	8
21	9	9	10	19	15	11	9	9	4	0	1	4	4	4	6	11	8	4	0	0	0	0	0	0	6
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	16	15	9	0	2
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0
25	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0
29	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	1	1.8

PERCENTAGE OF DATA VALID - 99.7

PERCENTAGE OF DATA INVALID - 0.3

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "....." INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "....." INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA



## ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - OCT 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	0
2	7	22	22	23	23	23	19	17	0	12	12	12	16	16	18	11	9	13	9	1	1	1	1	0	13
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9	9	10	11	10	2
8	11	5	0	0	3	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	6	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26	2	2	2	2	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	18	17	17	12	6	3	3	3	3
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	1	1	1	1	1	1	1	1	0	0	1	0	1	1	2	1	1	1	1	1	1	0	1	0	0.7

PERCENTAGE OF DATA VALID - 99.2

PERCENTAGE OF DATA INVALID - 0.8

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - DEC 81

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	6	2	1	0	0	0	0	0	0	0	0	0	6	2	1	0	0	1
3	0	0	0	4	4	6	6	6	6	4	0	0	0	3	2	2	6	16	21	9	4	1	0	2	4
4	14	14	13	12	12	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	3	7	14	26	22	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	8	8	8	8	8	8	8	3
10	8	8	8	8	8	8	8	10	10	10	11	11	11	11	12	12	12	12	12	12	12	12	11	10	10
11	11	11	12	12	12	12	14	14	12	11	10	12	12	11	12	12	11	11	11	10	10	10	10	10	11
12	10	10	10	9	9	9	9	10	10	10	9	9	10	10	8	6	6	7	9	9	9	8	8	8	9
13	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	10	8	9	9	8
14	9	9	9	9	9	8	7	8	8	8	10	10	10	10	9	9	9	9	9	9	10	9	9	9	9
15	9	9	9	11	11	10	8	8	9	8	8	8	8	8	8	8	8	8	9	9	9	8	9	9	9
16	9	8	8	8	8	7	8	8	8	8	8	8	9	8	8	8	8	7	7	7	8	10	8	9	8
17	9	9	9	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	10	9	9	9
18	7	6	5	3	3	12	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
19	19	14	11	11	11	13	10	9	9	8	8	8	7	7	8	7	6	5	6	6	6	6	6	6	9
20	6	6	6	6	6	6	5	5	5	5	5	5	5	6	6	6	6	6	6	5	6	6	5	5	6
21	5	5	5	5	5	5	5	5	5	5	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6
22	6	6	6	6	6	6	6	8	8	8	8	8	8	8	10	10	9	8	8	8	7	8	8	8	8
23	8	6	6	6	6	6	5	5	5	5	6	6	6	6	6	6	5	4	4	4	4	4	5	5	5
24	2	2	3	3	3	3	3	2	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	3	3	3	3	3	3	3	1
27	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
28	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4
29	5	5	5	5	5	5	4	3	3	3	3	3	1	1	1	3	3	3	3	3	3	3	3	3	3
30	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	2	2	3	1
31	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	1
MEAN	7	7	6	6	8	7	5	5	6	5	5	5	5	5	5	6	6	5	5	6	5	5	5	6	5.7

PERCENTAGE OF DATA VALID - 99.9

PERCENTAGE OF DATA INVALID - 0.1

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

MONTHLY SUMMARY OF HOURLY AND 2-HOURLY DATA FOR 1981

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO. 72063 MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH	NO OF DAYS	AVERAGE CONCENT	24-HOUR MAXIMUM	MAXIMUM READING
JAN	31	0.8	10	76
FEB	28	2.1	13	59
MAR	31	3.8	13	116
APR	30	3.1	20	68
MAY	31	2.7	12	109
JUN	30	2.4	20	81
JUL	31	0.7	8	29
AUG	31	1.2	11	37
SEP	30	0.1	1	5
OCT	31	0.7	13	26
NOV	30	1.8	24	64
DEC	31	5.7	38	78
YEAR	365	2.1	38	116



ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

MAR 13, 1982

MONTHLY GROUP FREQUENCY DISTRIBUTION FOR 1981

STATION - NE NO 72063

MONTH - JAN - 82

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063 MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH 00 TO 10 11 TO 20 21 TO 27 28 TO 50 51 TO 100 101 TO 300 301 TO 500 501 & OVER TOTAL

JAN	728	4	3	7	2	0	0	0	0	739	4
FEB	616	20	9	21	3	0	0	0	0	657	18
MAR	641	53	6	59	3	1	0	0	0	715	15
APR	652	22	13	35	4	0	0	0	0	718	31
MAY	705	27	5	32	1	1	0	0	0	742	51
JUN	677	18	7	25	3	0	0	0	0	720	15
JUL	726	8	4	12	0	0	0	0	0	739	12
AUG	715	24	1	25	0	0	0	0	0	744	4
SEP	709	0	0	0	0	0	0	0	0	709	0
OCT	716	16	6	20	0	0	0	0	0	738	6
NOV	685	18	4	22	4	0	0	0	0	718	11
DEC	667	50	8	58	5	0	0	0	0	743	18
YEAR	8237	260	66	92	25	2	0	0	0	8682	108

FREQUENCY DISTRIBUTION BY PERCENTILES

PERCENT  
OF DATA  
VALID

MIN

10

30

CONCENTRATIONS  
FREQUENCY DISTRIBUTION, PERCENT

50

70

90

95

98

99

MAX

ARITH  
MEAN

99.1 0 0.0 0.0 0.0 0.0 0.0 5.9 10.2 20.6 33.5 116 2.1

## ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

FEB 07, 1983

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - JAN 82

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	2	3	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	0	0	0	0	2
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0
4	4	4	4	7	3	3	3	3	3	3	3	3	4	4	5	5	6	6	21	28	36	32	18	13	9
5	6	6	4	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3
6	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	2	2	0
9	3	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	19	22	30	18	4
11	8	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	6	0	0	0	0	0	0	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	10	11	13	9	13	6	3	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	17	15	16	2
24	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEAN	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	2	3	2	2	0.9

PERCENTAGE OF DATA VALID - 99.5

PERCENTAGE OF DATA INVALID - 0.5

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

FEB 07, 1983

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - FEB 82

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	19	32	8	11	4
3	9	10	8	12	12	6	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	6	5	6	6	0	0	1
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	4	9	4	2
16	0	0	0	0	0	0	0	0	4	0	0	1	1	3	2	0	0	0	3	3	3	2	3	3	1
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	39	16	4	4	6	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	3
24	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	1
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	- DATA INVALID -																								
27	- DATA INVALID -																								
28	- DATA INVALID -																								

MEAN 2 1 0 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 1 2 2 2 1 1 0.7

PERCENTAGE OF DATA VALID - 86.8

PERCENTAGE OF DATA INVALID - 13.2

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "\*\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

FEB 07, 1983

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - MAR 82

HOUR DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1																									
2																									
3																									
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
6	3	4	5	5	5	4	4	4	4	4	4	4	4	3	3	3	3	7	11	9	15	11	11	11	6
7	10	10	10	8	8	6	6	8	10	7	6	7	7	7	6	6	5	7	7	7	7	6	6	6	7
8	4	4	4	4	4	4	4	4	3	3	4	2	3	3	3	4	4	5	5	5	6	7	6	6	4
9	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	3
11	0	0	0	0	0	0	0	0	0	1	2	2	5	4	4	4	4	4	4	5	5	5	5	5	2
12	2	3	3	3	3	3	3	3	3	3	3	3	4	4	2	3	3	4	4	5	5	5	5	5	4
13	4	4	4	4	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	4	4	3
14	3	3	3	3	3	2	2	2	2	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	4
15	2	2	2	2	3	3	3	3	3	3	3	1	0	0	0	0	0	0	4	6	5	5	5	5	3
16	5	5	5	5	5	7	7	6	6	6	6	6	1	1	1	1	1	3	4	5	5	6	6	6	5
17	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
18	3	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	5	20	26	6	5	14	4
19	7	6	13	21	9	18	23	9	11	4	12	7	12	19	4	3	3	2	2	2	4	3	3	3	8
20	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
22	0	0	19	11	43	31	11	26	10	3	4	3	4	1	1	3	5	1	1	2	1	1	1	1	8
23	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	14	34	4	17	8	12	16	9	7	5
26	0	0	0	0	4	5	6	10	22	7	15	5	23	44	18	26	60	60	81	76	69	72	56	51	32
27	25	8	4	2	1	1	1	1	1	1	6	9	17	7	0	0	0	3	2	1	1	1	1	1	6
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	8	9	9	9	9	2
MEAN	4	3	4	3	4	4	3	4	4	3	3	3	4	4	3	5	6	5	7	7	7	7	6	6	4.4

PERCENTAGE OF DATA VALID - 88.4

PERCENTAGE OF DATA INVALID - 11.6

PERCENTAGE OF DATA UNAVAILABLE - 0.0

NOTES 1. "....." INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "....." INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

FEB 07, 1983

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH - APR 82

HOUR DAY 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 MEAN

1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3	3	3	****	1
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0
3	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	****	0
4	46	52	62	68	40	24	15	19	28	15	36	16	5	7	2	3	2	4	4	3	4	0	0	19
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	4	11	8	4	0	0
6	0	3	3	0	0	0	0	0	0	2	7	2	3	0	3	3	9	34	9	1	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	2	****	****	6	7	13	9	19	15	2	2	3	3	4
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	2	0	0	2	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	4	3	3	3	3	1
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	2	1	3	1	1	1	1
11	3	3	6	0	0	0	0	0	0	0	4	9	4	3	2	0	0	1	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	7	12	6	10	6	3	3	3	3	3	3	3	3	3
14	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
15	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	4	4	4	4	5	8	10	8	8	7	11	14	5	4	7	3	3	3	3	3	3	3	3	5
18	4	3	2	1	1	1	1	1	1	1	1	3	1	1	2	2	2	3	3	2	2	2	2	2
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	3	3	4	4	4	4	1
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	14	26	29	10	4
21	3	3	2	2	2	2	2	2	2	2	2	2	0	0	0	0	1	5	3	4	4	0	0	2
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	5	5	5	1	1	1	1	1
28	0	0	0	0	0	0	0	0	0	0	****	-	-	-	-	-	-	-	-	-	-	-	-	1
29																								1
30																								1

- DATA UNAVAILABLE -  
- DATA UNAVAILABLE -

MEAN 2 3 3 3 2 1 1 1 1 1 3 2 1 1 2 2 2 4 3 2 2 2 3 3 2.0

PERCENTAGE OF DATA VALID - 90.7

PERCENTAGE OF DATA INVALID - 0.7

PERCENTAGE OF DATA UNAVAILABLE - 8.6

NOTES 1. "\*\*\*\*" INDICATES INVALID DATA DUE TO INSTRUMENTATION FAILURE

2. "-" INDICATES DATA IS UNAVAILABLE

3. "\*\*\*\*\*" INDICATES LESS THAN 2/3 VALID DATA FOR DAILY MEAN IN ONE DAY

4. "DATA UNAVAILABLE" AND "DATA INVALID" ARE USED INTERCHANGEABLY FOR PRE-1976 DATA



FEB 07, 1983

~~POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS~~

UNITS - PARTS/BILLION

STATION - NE NO 72063      MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH	NO OF DAYS	AVERAGE CONCENT	24-HOUR MAXIMUM	MAXIMUM READING
JAN	31	0.9	9	36
FEB	24	0.7	4	39
MAR	27	4.4	32	81
APR	27	2.0	19	68
YEAR	109	2.0	32	81

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

FEB 07, 1983

MONTHLY GROUP FREQUENCY DISTRIBUTION FOR 1982

POLLUTANT - TOTAL REDUCED SULPHUR-GASEOUS

UNITS - PARTS/BILLION

STATION - NE NO 72063

MUNICIPAL GARAGE, SMOOTH ROCK FALLS

MONTH	00 TO 10	11 TO 20	21 TO 27	28 TO 50	51 TO 100	101 TO 300	301 TO 500	501 & OVER	TOTAL
JAN	722	12	2	14	4	0	0	0	740 4
FEB	574	7	0	7	2	0	0	0	583 2
MAR	614	23	7	30	5	9	0	0	658 14
APR	628	13	2	15	7	3	0	0	653 10
YEAR	2538	55	11	18	12	0	0	0	2634

FREQUENCY DISTRIBUTION BY PERCENTILES

PERCENT  
OF DATA  
VALID

MIN

10

30

CONCENTRATIONS  
FREQUENCY DISTRIBUTION, PERCENT

50

70

90

95

98

99

MAX

ARITH  
MEAN

91.5 0 0.0 0.0 0.0 0.6 4.7 7.6 16.8 29.7 81 2.0



\*96936000009485\*